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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/616,712

07/10/2003

George T. Bayer

030364

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23464 7590 04/30/2007  
BUCHANAN INGERSOLL & ROONEY PC  
P.O. BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER

LAVILLA, MICHAEL E

ART UNIT

PAPER NUMBER

1775

MAIL DATE

DELIVERY MODE

04/30/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/616,712

Applicant(s)

BAYER ET AL.

Examiner

Michael La Villa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-13 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-13 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
2. A person shall be entitled to a patent unless –
3. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
4. Claims 1-4, 7-13, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Bayer et al. WO 98/20182 for the reasons of record in the Office Action mailed on 29 August 2006.
5. Claims 1, 2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Yagi et al. USPN 4,079,157 for the reasons of record in the Office Action mailed on 29 August 2006.

### ***Claim Rejections - 35 USC § 102/103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
  1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. Claims 7-13 and 15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yagi et al. USPN 4,079,157. Yagi et al. teaches a steel substrate that is diffusion coated with a coating of aluminum and silicon that is greater than 250 microns in thickness. See Yagi et al. (Figures 2, 3, and 6; col. 5, lines 11-15; col. 5, line 65 through col. 6, line 66; and col. 8, lines 13-58). Yagi et al. does not teach the claimed product-by-process limitation relating to pack cementation since the coatings of Yagi are formed by hot-dipping. However, applicant's Specification implies that the significant achievement of the claimed product-by-process limitation relates to cost-savings. See Specification (page 2, top paragraph). Therefore, the claimed product-by-process limitation presumably confers no patentably distinct structural or compositional feature, as compared to other diffusion processes that achieve comparable diffusion coating thicknesses. Hence, absent a showing to the contrary, the articles of Yagi are presumably either identical to or substantially identical to those claimed.

***Response to Amendment***

9. In view of applicant's amendments and arguments, applicant traverses the section 112, first paragraph enablement rejection and the section 112, second paragraph rejection of the Office Action mailed on 29 August 2006. Rejections are withdrawn. The enablement rejection is withdrawn since the newly claimed

substrates are exemplified in the Specification with diffused coating thicknesses in the claimed range.

10. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Bayer of the Office Action mailed on 29 August 2006. Applicant argues that the examples in parent application support the claimed invention. However, it is unclear how the examples, other subject matter of the parent application, and/or other arguments demonstrate applicant was in possession of the claimed invention as of the filing date of the parent application. The parent application does not apparently teach the broadly claimed diffusion coating thicknesses, nor the specific aluminum requirement of Claim 3. Hence, there appears to be a lack of written description support in the parent application for the invention as now claimed. Since written description support in the parent application has not been established, the parent application cannot confer an earlier effective filing date. Rejection is therefore maintained.
11. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Yagi of the Office Action mailed on 29 August 2006. Applicant argues that the diffusion layer thickness in Yagi is not specifically reported, independent of the so-called alloy layer in Yagi. The discussion of Figures 2 and 3 at column 6, lines 42-66 implies that the alloy layer thickness is on the order of 10 to 25 microns, whereas the combined layer thickness is on the order of 400 to 700 microns. Hence, the diffusion layer thickness would be

expected to be in the range of 375 to 675 microns, all thicknesses of which are in excess of the claimed minimum amounts. Rejection is maintained.


### **CONCLUSION**

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael La Villa  
24 April 2007

  
MICHAEL E. LAVILLA PH.D.  
PRIMARY EXAMINER